

HARDWARE RESOURCE IDENTIFIER FOR SOFTWARE-DEFINED COMMUNICATIONS SYSTEM

Abstract

A hardware resource identifier (19) recognizes hardware resource dependencies in a multi-channel communications system. Initially, system communications domains (D1-D4) in which system hardware resources are located are identified. Next, managed hardware resources, hardware resource groups and hardware resource group boundaries among the system hardware resources are identified. Association labels are then assigned to the system hardware resources to identify relationships, if any, between the system hardware resources and external hardware, to discern redundant resources within respective ones of the hardware resource groups, and to characterize dedicated coupling between individual ones of the system hardware resources. An abstract resource specification (78) is then interpreted to locate available system hardware resources, as organized into the system identified communications domains and the identified hardware resource groups, to enable maximum preservation of most functional and least available hardware resources during hardware resource allocation.

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